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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/066,099	02/01/2002	John B. Roes	0685-095	6030

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EXAMINER

LEE, DAVID J

ART UNIT	PAPER NUMBER
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2613

DATE MAILED: 03/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/066,099		ROES ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	David Lee		2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 21 December 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments with respect to the claims have been considered but are moot in view of the new grounds of rejection.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3, 7, and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 3 and 7 recites the limitation "the soldier's helmet". There is insufficient antecedent basis for this limitation in the claim. For purposes of examination, this limitation will be read as "the combat response unit."

Claim 22 recites the limitation "transmitter means". There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dubois et al. (US Patent No. 5,966,227).

Regarding claims 1, 11 and 31, Dubois teaches a system for combat identification as friend or foe (IFF) communications comprising: a combat interrogatory unit (20 of fig. 2; left half of fig. 1) comprising projector means for projecting an infrared transmit signal (1 of fig. 1) including a transmitted code of the day (the wavelength of IR signal 7 is the TCOD; note also col. 6, lines 53-67), receiver means for receiving a reflected IR transmit signal (2 of fig. 1) including a response code of the day (col. 4, lines 58-61), and means for combining the received RCOD with the TCOD to identify the source of the reflected IR transmit signal as friend or foe (4 of fig. 1; col. 4, lines 21-29: the TCOD and RCOD are compared to determine the interrogation status of the target unit; i.e. - if the wavelengths are the same, the target is a foe, and if the wavelengths are different, the target is friendly; see also col. 5, lines 45-52); and a combat response unit (right half of fig. 1; 30 of fig. 2 – the combat response unit is mounted on the head of the vehicle) comprising sensor means for receiving a projected IR transmit signal including the TCOD (10' of fig. 1), retroreflector means for reflecting an incoming IR transmit signal generally back along the incoming path thereof (10 of fig. 1; see also col. 5, lines 22-43), obturator means for obstructing the retroreflector means to prevent reflection thereby (18 of fig. 1), and means for opening and closing the obturator means according to the RCOD (col. 6, lines 45-67: the obturator/filter restricts transmission if the laser wavelengths, i.e. the RCOD, is used as a pump beam). Dubois does not expressly disclose that the combat response unit is helmet-mounted. However, Dubois does suggest that the system can be implemented in ground-to-ground communications (col. 1, lines 40-42). Furthermore, mounting combat response units on

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helmets for interrogatory purposes is well known in the art and examiner takes official notice of this. It would have been obvious to a skilled artisan at the time of invention to mount the combat response unit of Dubois on a helmet in order to provide effective interrogatory procedures for infantry.

Regarding claims 2, 12, 23, 24, and 32, Dubois teaches the limitations as applied to the previous claims including means for combining the received TCOD with a second stored COD to produce the RCOD (col. 4, lines 52-61) but does not expressly disclose means for combining a first stored code of the day with a randomly-generated number to produce the TCOD. Examiner takes official notice that periodically and randomly generating codes from a stored database is well known and usually necessary in military applications. It would have been obvious to a skilled artisan at the time of invention to periodically generate the TCOD by using a random number with a stored code in order to prevent communication interceptions and to maintain covert operations.

Regarding claim 3, 7, 13, 25, 27, Dubois teaches the limitations as applied to the previous claims but does not expressly disclose means for deactivating the combat response unit responsive to a doffing of the helmet. Examiner takes official notice that this feature is well known in the art. It would have been obvious to a skilled artisan at the time of invention to provide means shutting down the combat response unit when not in use in order to save power and to prevent complications.

Regarding claims 4, 8, 14, 26, 28, 29, Dubois teaches the limitations as applied to the previous claims but does not expressly disclose means for accepting biometric data at the combat response unit; and means for activating the combat response unit responsive to the biometric

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data. Examiner takes official notice that the use of security measures, such as biometrics, in military weapons is well known in the art. It would have been obvious to a skilled artisan at the time of invention to incorporate biometric capabilities for activation of the combat response unit in order to provide authorization access and strengthen security measures.

Regarding claims 6, 10, 15, 30, Dubois teaches the limitations as applied to the previous claims but does not expressly disclose means for generating an arrival quadrant signal representing the direction of arrival of the IR transmit signal. Examiner takes official notice that directional signaling is well known in military detection applications and could have been easily incorporated into the system of Dubois, since the combat response unit comprises multiple reception panels. It would have been obvious to a skilled artisan at the time of invention to incorporate a directional signal detector for locating a signal source in order to provide increased safety measures and effective communication.

Regarding claims 5, 9, 16, 33, and 34, Dubois teaches means for fixing the projector means and the receiver means to a weapon (the helicopter of fig. 1 is considered a weapon).

Regarding claim 17, Dubois teaches the limitations as applied to the previous claims but does not expressly disclose means for deactivating the combat response unit responsive to a doffing of the helmet. Examiner takes official notice that this feature is well known in the art. It would have been obvious to a skilled artisan at the time of invention to provide means shutting down the combat response unit when not in use in order to save power and to prevent complications.

Regarding claim 18, Dubois teaches the limitations of claim 17 but does not expressly disclose means for accepting biometric data at the combat response unit; and means for

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activating the combat response unit responsive to the biometric data. Examiner takes official notice that the use of security measures, such as biometrics, in military weapons is well known in the art. It would have been obvious to a skilled artisan at the time of invention to incorporate biometric capabilities for activation of the combat response unit in order to provide authorization access and strengthen security measures.

Regarding claim 19, Dubois teaches means for fixing the projector means and the receiver means to a weapon (the helicopter of fig. 1 is considered a weapon).

Regarding claim 20, Dubois teaches the limitations of claim 11 but does not expressly disclose means for accepting biometric data at the combat response unit; and means for activating the combat response unit responsive to the biometric data. Examiner takes official notice that the use of security measures, such as biometrics, in military weapons is well known in the art. It would have been obvious to a skilled artisan at the time of invention to incorporate biometric capabilities for activation of the combat response unit in order to provide authorization access and strengthen security measures.

Regarding claim 21, Dubois teaches the limitations of claim 11 but does not expressly disclose means for generating an arrival quadrant signal representing the direction of arrival of the IR transmit signal. However, examiner takes official notice that directional signaling is well known in military detection applications and could have been easily incorporated into the system of Dubois, since the combat response unit comprises multiple reception panels. It would have been obvious to a skilled artisan at the time of invention to incorporate a directional signal detector for locating a signal source in order to provide increased safety measures and effective communication.


Regarding claim 22, Dubois teaches means for fixing the transmitter means and the receiver means to a weapon (the helicopter of fig. 1 is considered a weapon).

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Lee whose telephone number is (571) 272-2220. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on (571) 272-3078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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**KENNETH VANDERPUYE**  
**SUPERVISORY PATENT EXAMINER**